

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-10. (Cancelled)

11. (Currently amended) A method for ~~requesting access to~~ accessing a ~~congested~~, controlling communication node by contending communication nodes in a wireless mesh network, the mesh network having one or more communication nodes that may be either a controlling node or a contending node, the method comprising:

accessing the controlling node in a non-PRP mode where multiple nodes are not contending for access to the controlling node; and

accessing the controlling node in a PRP mode where multiple nodes are contending for access to the controlling node, the PRP mode comprising:

withholding, at a contending node, requests for access to a controlling node until receipt, at the contending node, of a poll request packet broadcast from the controlling node, the poll request packet containing information indicating availability of a communication slot;

broadcasting from the controlling node to a plurality of contending nodes the poll request packet when the controlling node is ready to provide services;

directing from the contending node a poll packet to request access to the controlling node;

broadcasting from the controlling node to the plurality of contending nodes a contention resolution packet, the contention resolution packet containing rules information for each contending node requesting access to follow in order to send data to the controlling node;

in response to the contention resolution packet, causing each contending node requesting access to transmit data to the controlling node in accordance with the rules information; and

broadcasting from the controlling node a broadcast acknowledgement for data received by the controlling node, the broadcast acknowledgement received by all of the plurality of contending nodes, including both winner contending nodes having requested access granted by the controlling node and loser contending nodes not having requested access granted by the controlling node.

12. (Previously presented) The method of claim 11, further comprising:
broadcasting from each contending node requesting access to the controlling node, an acknowledgement for data received by the contending node from the controlling node.

13. (Previously presented) The method of claim 12, wherein the controlling node is in a PRP state during the steps of broadcasting the poll request packet, the contention resolution packet and the broadcast acknowledgement, and wherein the controlling node exits the PRP state when the controlling node is no longer congested.

14. (Previously presented) The method of claim 11, further comprising:
purging data at any contending node upon receipt of the controlling node broadcast acknowledgement, wherein such acknowledgement verifies successful transmission of the data from that contending node.

15. (Previously presented) The method of claim 11, further comprises:
providing poll minislots following the broadcasted poll request packet, the minislots establishing times during which contending nodes may direct poll packets for requesting access to the controlling node.

16. (Previously presented) The method of claim 15, wherein the minislots comprise:
reserved minislots that are reserved for contending nodes already assigned minislots for requesting access to the controlling node; and
contention minislots for contending nodes not already assigned minislots for requesting access.

17. (Previously presented) The method of claim 16, wherein the contention minislots are used randomly by contending nodes not already assigned minislots.

18. (Previously presented) In a mesh network having a plurality of client nodes that access a controlling node for sending data through the mesh network, a method for the client nodes to access the controlling node, comprising:

each client node accessing the controlling node in a non-PRP mode where multiple client nodes are not contending for access to the controlling node; and

each client node accessing the controlling node in a PRP mode where multiple client nodes are contending for access to the controlling node, the PRP mode comprising:

withholding, at a contending node, requests for access to a controlling node until receipt, at the contending node, of a poll request packet broadcast from the controlling node, the poll request packet containing information indicating availability of a communication slot;

broadcasting from the controlling node to a plurality of contending nodes the poll request packet when the controlling node is ready to provide services;

directing from the contending node a poll packet to request access to the controlling node;

broadcasting from the controlling node to the plurality of contending nodes a contention resolution packet, the contention resolution packet containing rules information for each contending node requesting access to follow in order to send data to the controlling node;

in response to the contention resolution packet, causing each contending node requesting access to transmit data to the controlling node in accordance with the rules information; and

broadcasting from the controlling node a broadcast acknowledgement for data received by the controlling node, the broadcast acknowledgement received by the plurality of contending nodes, including both winner contending nodes having requested access granted by

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the controlling node and loser contending nodes not having requested access granted by the controlling node.